UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,232	01/21/2004	Kia Silverbrook	MPA26US	2211

24011 7590 11/15/2005

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER	
MARTIN, LAURA E	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/760,232	SILVERBROOK ET AL.	
	Examiner	Art Unit	
	Laura E. Martin	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/3/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 5 of copending Application No. 10/760235.

10/760232	10/760235
A printhead assembly, comprising: at least one printhead module comprising at least two printhead integrated circuits, each of which has nozzles formed therein for delivering printing fluid onto the surface of print media, a support member supporting and carrying the printing fluid for the at least two printhead integrated circuits, and an electrical connector for connecting electrical signals to the at least two printhead integrated circuits; drive electronics incorporating at least two	A printhead system, comprising: at least one printhead module comprising at least two printhead integrated circuits, each of which has nozzles formed therein for delivering printing fluid onto the surface of print media, a support member supporting and carrying the printing fluid for the at least two printhead integrated circuits, and at least two electrical connectors for connecting electrical signals to the respective ones of the at least two printhead integrated circuits; drive electronics

controllers for controlling the printing operation of at least one of the at least two printhead integrated circuits via the electrical connector, the at least two controllers being interconnected; and a casing in which the at least one printhead module and the drive electronics are removably mounted.	incorporating at least one controller for controlling the printing operation of at least one of the at least two printhead integrated circuits; and a casing in which the at least one printhead module and the drive electronics are removably mounted, wherein each of the at least two electrical connectors is arranged to direct control signals from the at least one controller to the corresponding printhead integrated circuit and to direct power from a power supply to the corresponding printhead integrated circuit and the drive electronics.
A printhead assembly according to claim 1, wherein: the at least one printhead module is formed as a unitary arrangement of the at least two printhead integrated circuits, the support member, the electrical connector, and at least one fluid distribution member mounting the at least two printhead integrated circuits to the support member; and the support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits and includes a plurality of apertures extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members.	A printhead system according to claim 1, wherein: the at least one printhead module is formed as a unitary arr angement of the at least two printhead integrated circuits, the support member, the at least two electrical connectors, and at least one fluid distribution member mounting the at least two printhead integrated circuits to the support member; and the support member has at least one longitudinally extending channel for carrying the printing fluid for the printhead integrated circuits and includes a plurality of apertures extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members.

The claims are not patentably distinct from each other because the application refers to at least two controllers wherein the copending application refers to one controller. However, one having ordinary skill in the art at the time of the invention would have recognized that having two or more controllers would allow specializing the functionality of each controller.

This is a provisional obviousness-type double patenting rejection.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the

description: Figure 17c; 500. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Silverbrook et al. (US 6439908).

As per claim 1, Silverbrook et al. teaches a printhead assembly (10) comprising: at least one printhead module (12) comprising at least two integrated circuits (18), each of which has nozzles (42) formed therein for delivering printing fluid into the surface of print media, a support member supporting and carrying the printing fluid for the at least two printhead integrated circuits (18), and an electrical connector (C3, L64-65) for

connecting electrical signals to the at least two printhead integrated circuits; drive electronics incorporating at last two controllers for controlling the printing operation of at last one of the at least two printhead integrated circuits via the electrical connector, the at least two controllers being interconnected (C3, L59-64); and a casing (14) in which the at least one printhead module and the drive electronics are removably mounted.

As per claim 2, Silverbrook et al. teaches a printhead assembly (10) wherein: the casing comprises a support frame (56) on which at least two mounting elements are arranged in abutting relationship along a longitudinal direction of the casing; and the at least two controllers (C3 L49-65) are arranged on a printed circuit board (54), each of the printed circuit boards being removably mounted by at least one of the two or more mounting elements (28, 56) and being interconnected by an electrical connecting member (72 electrical conductors) located between the abutting mounting elements.

As per claim 3, Silverbrook et al. teaches a printhead assembly (10), wherein each of the mounting elements comprises side regions (46) having raised and recessed portions so that the recessed portions of abutting mounting elements form a recess into which the electrical connecting member can be placed (C2, L54-58).

As per claim 4, Silverbrook et al. teaches a printhead assembly (10) wherein the electrical connecting member comprises a non-conductive material (96) which is clad with conductive strips (58, 60), the electrical connecting member being arranged so as to fit within the recess formed between the abutting mounting elements (see Figure 3).

As per claim 5, Silverbrook et al. teaches a printhead assembly (10) wherein the conductive strips (58, 60) are positioned to overlay a series of spaced connection strips (106, 102) at the edge regions of each of the individual printed circuits.

As per claim 6, Silverbrook et al. teaches a printhead assembly (10) wherein there is twice as many conductive strips (58, 60) of the electrical connecting member as there are connection strips of the printed circuit boards (28), whereby each connection strip of the printed circuit board will engage with at least one of two adjacent conductive strips (see Figure 3).

As per claim 7, Silverbrook et al. teaches a printhead assembly (10) wherein one printed circuit board having one controller (C3, L49-65) thereon is supported by more than one mounting element (28, 26, 24).

As per claim 8, Silverbrook et al. teaches a printhead assembly (10) wherein the at least one printhead module (12) is formed as a unitary arrangement of the at least two printhead integrated circuits (18), the support member (28), the electrical connector (C3, L59-65), and the at least one fluid distribution member (30) mounting the at least two printhead integrated circuits to the support member; and the support member has at least one longitudinally extending channel (72) for carrying the printhead fluid for the printhead integrated circuits and includes a plurality of apertures (72) extending through a wall of the support member arranged so as to direct the printing fluid from the at least one channel to associated nozzles in both, or if more than two, all of the printhead integrated circuits by way of respective ones of the fluid distribution members (C4, L41-44).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/09/05

Laura E. Martin

11/9/05

MANISH S. SHAH
PRIMARY EXAMINER